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ABSTRACT

Interim results of the study conducted to determine the effectiveness of federally funded bilingual education projects are described Objectives were (a) to determine the cognitive and affective impact of bilingual education on students in Spanish/English bilingual education projects funded through ESEA Title VII, (b) to describe the educational processes in these projects, (c) to identify educational practices which result in greater gains in student achievement, and (d) to determine per student costs associated with each project. Students enrolled in bilingual projects were contrasted with students not enrolled in such projects. Standardized achievement tests were used to measure performance in language arts and mathematics computation in both languages. Information was collected on student and teacher characteristics and attitudes. Results from teacher questionnaires indicate that few of the students participating in the projects could be classified as having limited English-speaking ability. Title VII Hispanic students, including Spanish monolinguals, performed better in mathematics computation than could have been expected in the absence of a program. Results on English reading and vocabulary tests are mixed but generally less favorable for Title VII students, and observed achievement gains in Spanish language arts by Title VII Hispanic students are said to not be solely attributable to participation in bilingual education programs. (CLK)

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Executive Summary PLANNING/EVALUATION STUDY

U.S. DEPARTMENT OF HEALTH
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Interim Results

EVALUATION OF THE IMPACT OF ESEA TITLE VII SPANISH/ENGLISH BILINGUAL EDUCATION PROGRAM

April 1977

FR008520

U.S. Office of Education /Office of Planning, Budgeting and Evaluation

BACKGROUND

The Bilingual Education Program was established in 1968 to demonstrate ways of meeting the special educational needs of students of limited English-speaking ability. A major goal of the program is to show how children can progress in school using their native language while acquiring competence in the English language. Authorized by Title VII of the Elementary and Secondary Education Act (ESEA) of 1965, as amended, the program provides funds to local educational agencies for the development and implementation of bilingual education projects.

Educators and noneducators alike have shown a growing awareness of the lack of -- and need for -- evidence regarding the effectiveness of bilingual education programs. In 1974, the U.S. Office of Education/Office of Planning, Budgeting, and Evaluation contracted with the American Institutes for Research of Palo Alto, California to conduct a study of the effectiveness of federally funded bilingual education projects. Up to that time, no large-scale national evaluation of the effectiveness of the Title VII Program had been conducted.

Bilingual education projects selected for evaluation were all Title VII Spanish/English bilingual projects in either their fourth or fifth year of funding as of fall 1975. Projects such as these were thought to be reasonably mature projects -- ones having refined their approach to bilingual education over time. (The variety of languages used in the other projects and the problems of developing testing instruments for these languages led to the decision to limit the present study to Spanish/English bilingual projects, which comprise the majority of all bilingual projects.

The objectives of the study were:

(a) to determine both the cognitive and affective impact of bilingual education on students in Spanish/English bilingual education projects funded through ESEA Title VII;

(b) to describe the educational processes operating in these projects;

(c) to identify those educational practices which result in greater gains in student achievement;

(d) to determine per student costs associated with each project.

This Executive Summary describes interim results of the Study; final results will be available in the fall of 1977.

METHODOLOGY

The general design of the Impact Study was one of contrasting the performance of two groups of students: those enrolled in Title VII Spanish/English bilingual projects and comparable students not enrolled in such projects. Students from grades 2 through 6 were pretested in fall 1975 and posttested in spring 1976. The characteristics of projects in operation were documented thoroughly for a subsample of all classrooms of students involved in the Study. The Title VII group of students consisted of approximately 5300 students, in 286 classrooms, in 117 schools, in 38 projects. The non-Title VII group of students (comparable students) consisted of approximately 2400 students, in 115 classrooms, in 50 schools.

DATA COLLECTION

Standardized achievement tests were used to measure student achievement in English Language Arts (Reading and Vocabulary), Mathematics Computation (two versions of test, one in English and one in Spanish), and Spanish Language Arts (Reading). In addition, information was collected via a Student Questionnaire (two versions of questionnaire, one in English and one in Spanish) about student background factors and student attitude toward school-related activities. To assess teacher characteristics and attitudes toward bilingual education, a teacher/aide questionnaire was developed. To document the educational experiences of subsets of students in the sample, interviews were conducted with personnel at those sites selected and classrooms were observed.

Each student was assigned a testing package containing tests appropriate to their level of language competence as judged by the classroom teacher: English-dominant, Spanish-dominant, bilingual Spanish-dominant, bilingual English-dominant. All students were administered the English Language Arts tests. The testing sessions were conducted in the late fall and late spring of the 1975-76 school year.

THE SAMPLE

Students participating in each of the 38 Spanish/English bilingual projects in their fourth or fifth year of funding (as of fall 1975) were tested. Within each project, at least one classroom was randomly selected for testing from each grade level 2 through 6. To the extent that participating projects would agree to additional testing, additional classrooms of students were randomly selected for testing. Not every grade at every school was tested; however, for a given project, all grades were represented. The result was that approximately 40 to 50 per cent of all classrooms within each project were tested.

For each Title VII classroom selected for testing, project personnel were asked to nominate non-Title VII classrooms (comparable students) within or nearby their district whose students matched the Title VII students in

terms of (a) ethnicity, (b) socioeconomic status, and (c) grade level. Where there was more than one potential "match," a random selection was made to select the non-Title VII classroom to be included in the Impact Study. However, 18 projects were not able to nominate comparable non-Title VII classrooms. The non-Title VII students were roughly comparable to the Title VII students, with the one exception that more non-Title VII students than Title VII students were classified by their teachers as either English-dominant or bilingual English-dominant -- 96 per cent as compared to 75 per cent. (See footnote 1.)

DATA ANALYSIS PROCEDURES

Two data analysis procedures were used to assess the overall effectiveness of the Title VII Spanish/English bilingual projects. One, posttest scores of Title VII students -- adjusted statistically for differences between groups on pretest score and socioeconomic status -- were contrasted with those of non-Title VII students for each grade 2 through 6. Two, the achievement levels of Title VII and non-Title VII students were contrasted with national norms whenever such norms were available for the achievement test used.

FINDINGS

What kinds of students were participating in the Title VII projects?

- Approximately 75 per cent of the students enrolled in the Title VII Spanish/English bilingual classrooms were of Hispanic origin.
- However, less than one-third of the students enrolled in the Title VII classrooms in grades 2 through 6 were of limited English-speaking ability.

How experienced were the Title VII teachers and aides in bilingual education?

- Almost all the teachers and most of the aides had been involved with inservice or district workshops in bilingual education and had taken course work in bilingual education.
- Two-thirds of the teachers and two-thirds of the aides had two or more years of teaching experience in bilingual education classrooms.
- Approximately two-thirds of the teachers and almost all of the aides indicated that they spoke both English and Spanish in their homes.

[1]The final report will contain the results of various analyses which will attempt to statistically eliminate this difference between Title VII and non-Title VII students.

What were some general characteristics of the Title VII projects?

- The number of students served by a Title VII project ranged from 200 to 5000, with approximately half of the projects serving between 200 and 500 students each.

- Project management was generally stable over the 4 or 5 years of operation. Ten per cent of the projects had more than two project directors; about half had two directors; and, one-third had the same director since the project's inception.

- Although the intent of the ESEA Title VII legislation is to focus upon students of limited English-speaking ability, approximately 85 per cent of the project directors indicated that Spanish-dominant students remain in the bilingual project once they are able to function in school in English. Only 5 per cent of the project directors indicated that a student is transferred to an English-only classroom once the student learns English well enough to function in school.

- For students enrolled in the Title VII projects, per pupil expenditures from Title VII funds ranged from $150 to $739 with an average of $310; district expenditures ranged from $680 to $1243 with an average of $915; funds for bilingual education from State and/or Federal sources ranged from $18 to $71 with an average of $44; and, funds from other sources (Federal and State, but not bilingual) ranged from $0 to $271 with an average of $174. Considering all sources of funds, the per pupil cost for Title VII students ranged from $1127 to $2120 with an average of $1398. (The grand total per per cost for non-Title VII students ranged from $992 to $1534 with an average of $1022.)

What was the impact of Title VII projects on student achievement and attitude toward school?

- Although the exact percentiles vary among grades, both Title VII and non-Title VII students were achieving in English Language Arts at approximately the 20th percentile relative to the national norm both when tested in the fall and in the spring. (See footnote 2.)

[2]The Comprehensive Test of Basic Skills was used to measure student achievement in English Language Arts and Mathematics computation. Although the norm table for results obtained at the end of the school year is empirically based, the norm table for the beginning of the school year is based on estimated student achievment. A more accurate estimation (in progress) of the norms for the beginning of the school year may slightly alter these results. The results of these analyses will appear in the final report.

- Non-Title VII Hispanic students outperformed Title VII students on English Language Arts. The two groups were similar on socio-economic status and pretest score; in addition, statistical corrections were made for differences which did exist. However, there were large differences in language dominance, the non-Title VII group being more English-dominant, and adjustments have not yet been made for these differences. Therefore, the differences in performance between the two groups may be accounted for by either participation in the program or by language dominance or by both factors. Both groups generally either maintained or improved their percentile ranks but it is possible that further, more refined, analysis will lessen these positive effects.

- Title VII Hispanic students generally performed better than non-Title VII Hispanic students with regard to Mathematics Computation. However, both groups generally either maintained or improved their percentile rank (approximately 30) from pre-test to posttest.

- For Title VII Hispanic students, posttest achievement in Spanish Reading exceeded that measured at pretest; however, because there was no way to estimate how well such students would have scored in the absence of a bilingual education program, the extent to which such gains should be attributed to the program is not clear.

- Participation in a Title VII project did not affect attitudes toward school-related activities.

SUMMARY

The evaluation of the ESEA Title VII Spanish/English bilingual projects indicates that a relatively small number (less than one-third) of students participating in the projects could be classified as having limited English-speaking ability. With respect to student achievement, the evaluation indicates that:

(a) Title VII Hispanic students -- including those who were Spanish monolingual -- performed better in Mathematics computation than would have been expected in the absence of a program.

(b) The results on English reading and vocabulary tests are mixed but generally less favorable for Title VII students. Hispanic students in Title VII classrooms usually performed poorer than non-Title VII students. However, the non-Title VII students as a group were more English-dominant than the Title VII students -- and this difference may account for some of the results. Both groups generally either maintained or improved their percentile ranks from pretest to posttest.

(c) Achievement gains in Spanish Language Arts by Title VII Hispanic students were observed but could not be attributed solely to participation in the bilingual education program.

One difficult problem with any evaluation of program impact is estimating what student performance would have been in the absence of that program. Further refinements of such estimates will be presented in the final report and may slightly alter the findings presented at this time, but no major differences are expected.